UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,612	07/26/2005	Christoffer Apneseth	034193-009	7118

21839 7590 03/11/2008

BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER	
D AGOSTA, STEPHEN M	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
03/11/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No.	Applicant(s)	
	10/516,612	APNESETH ET AL.	
	Examiner	Art Unit	
	Stephen M. D'Agosta	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4 and 9* is/are allowed.

6)☒ Claim(s) *1-3 and 5-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

1. A new examiner has been assigned to this case – Stephen D'Agosta.

2. The applicant argues that Flach does not properly reject the claims. The examiner disagrees since the prior art teaches a "generic" TDMA system which is not disclosed to have certain constraints requiring how it must be implemented (eg. a limiting factor). The cornerstone of "multiplexing" is to allow multiple users to simultaneously access a channel/link whereby each is afforded a portion of the available bandwidth. Flach's teaching of a TDMA network clearly allows each user to be given an individual timeslot whereby they can transmit on different "timeslots" (eg. an analogous FDMA system uses different frequencies). Similarly, it is well known in cellular systems for the uplink frequencies to be different than the downlink frequencies (which is a design choice – and Flach clearly alludes to this by stating "..these control packets can alternatively be transmitted on different frequencies" after he mentions that they are sent on the same frequency).

3. A "new" rejection is found below which addresses the claim amendments (and new claims).

4. The examiner notes the claims (eg. 1, 4 and 9) use the term "and/or" which can be interpreted as an "alternative" format and thus only require the examiner to

examine only one or the other (eg. a sensor or an actuator). The applicant should correct this.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5-8, are rejected under 35 U.S.C. 102(b) as being anticipated by Flach et al. (US 5,748,103).

Regarding **claim 1 ~~and 4~~**, Flach teaches the method and the system for operating a system according to TDMA (Time Division Multiple Access) with a fixed quantity "n" (figure 1 shows an operational system whereby the administrator can "determine/fix" how many patients are to be monitored) of wireless sensors ~~and/or actuators as nodes (S.1 ... S.n)~~ **{Alternative format}** and a base station (BS) wherein "n" is any positive integer (figure 1 shows a positive number of sensors), said system being installed in a machine or installation, such as industrial robots or an automated manufacturing or production unit, [Flach: Abstract, 4 - 10] wherein cyclical TDMA data transmission blocks are transmitted and each TDMA data transmission block is composed of consecutive time slots, [Flach: (;8, 1 - 7; Figure 3] wherein each time slot is allocated to a specific node, [Flach: (;5, 35 - 39] wherein the uplink signals (UL.1 ... UL.n) can be transmitted from the different nodes (S.1... S.n) to the base station (BS) simultaneously on at least two different frequencies (fl, f2, f3), [Flach: (;5, 44 - 48]

wherein the downlink signals (DL) are transmitted from the base station (BSA) to the different nodes (S.1... S.n) on only one frequency, which differs from the uplink frequencies, [Flach: C8, 53 - 56] wherein the time slots and the different uplink frequencies of the different nodes are defined once and are thereafter retained. [Flach: C10, 2 - 10; C11, 27 - 30]

Regarding **claim 2**, Flach teaches the method according to claim 1, wherein the different uplink frequencies of the different sensors and/or actuators (S.1 ... S.n) and the downlink frequency are defined in such a way that interferences are avoided ~~as far as possible~~. [Flach: C12, 17 - 24]

Regarding **claim 3**, Flach teaches the Method according to claim 1, wherein the frequency hopping method is used. [Flach: Abstract, 18- 21]

Regarding **claim 5**, Flach teaches Claim 1, wherein the sensors have a sensor head which detects the sensor environment and the actuators have an actuator unit and a control unit to detect the sensor environment (Flach's device/design senses at least the patient in the environment it is currently inhabiting, Abstract, figure 1, and C1, L15-39 which teaches telemetry).

Regarding **claim 6**, Flach teaches Claim 1, wherein the base station receives uplink signals that comprise sensor signals from the sensors and signals indicating the

current status of actuators (C1, L15-39 teaches telemetry signals from the sensor to the access point for people to monitor).

Regarding **claim 7**, Flach teaches Claim 1, wherein the downlink signals comprise control signals to activate and deactivate the actuators and sensors and to set specific parameters of the actuators and sensors, respectively (Flach teaches commands being sent to the device for various purposes, which reads on the claim - see C11, L37-50 and C9, 66-67:

"When a control packet is a response to a network request from a telemeter 104, or contains a command to a telemeter, the control packet will contain a telemeter address which uniquely identifies the target telemeter."

Regarding **claim 8**, Flach teaches Claim 1, wherein the time slots and the different uplink frequencies of the different nodes are defined once and are thereafter retained so that the receiver of the base station (BS) can identify the relevant sensor and actuator node (S. 1... S.n) from the number and frequency allocated to each time slot (C5, L35-40):

The data transmissions of the central station 102 and of the respective telemeters 104 are separated in-time from one another using a time-division multiple-access (TDMA) scheme in

which each transmitting device is assigned a unique timeslot during which time to transmit its data..

The examiner notes that the ability to "retain" this timeslot truly depends on how many users can transmit data versus how many timeslots are available. Given that there can be a 1:1 correspondence, then a user would retain their timeslot. Should many more users be requiring bandwidth, then the design would be modified to allow different users to access different timeslots (whereby their unique device address would identify them).

Allowable Subject Matter

Claims 4 and 9 allowed.

These claims recite highly detailed designs which are not found in the prior art of record.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen M. D'Agosta/
Primary Examiner, Art Unit 2617